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No. 332



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6 January 1982

WORLDWIDE REPORT  
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## REDDY, CHAVAN NOTE ENVIRONMENTAL PROBLEMS

Bombay THE TIMES OF INDIA in English 19 Nov 81 p 7

[Text] BANGALORE, November 18. THE President, Mr. N. Sanjiva Reddy, today called pointed attention to the harmful effects arising out of the indiscriminate use of chemicals and drugs, resulting in environmental pollution, and the rapid using up of limited natural resources without much thought to the future.

It was common knowledge how the depletion of forests had increased soil erosion and brought about an adverse effect of climatic conditions. The widespread use of some drugs and chemicals to control pests and diseases had brought about the problem of pollution. Industrial growth had in its wake created difficulties about the disposal of industrial wastes without polluting the environment. These were some of the urgent issues which science and technology had to face and solve, Mr. Reddy said.

Inaugurating here the 11th national science exhibition for children whose theme is "science in our environment," the President said science and technology had throughout the world made undreamt of progress in the last few decades, with mankind deriving many benefits. But there was something to be said on the debit side, too.

## TRIBUTES TO NEHRU

He paid tributes to Mr. Nehru for laying the foundation of modern India with the ambition to bring about a rapid improvement in the standard of living of India's vast population through industrialisation and spread of science and technology among the people. India had made considerable progress in this direction since independence which had rightly gained recognition in the world.

However, the country had yet a long

way to go to be able to absorb and adapt the latest technology in different fields and keep abreast of the rapid scientific and technological developments.

The rapid absorption by industry of limited natural resources and the ever increasing consumption of fossil fuels, Mr. Reddy said, had made the search for new energy resources and alternative raw materials a matter of great urgency. The continued maintenance of the present quality and the standard of living depended on success in these efforts. Whatever solutions were found would have to take into account the risk of environmental pollution which had to be avoided.

The President commended the National Council of Educational Research and Training, sponsor of the exhibition, for its pioneering effort in developing environment-based science curricula for classes 1 to 12.

It would be ideal if all the states and Union territories tried to adopt or adapt the curricula or formulate their own, on similar lines, he said.

The President noted that this was the Year of the Disabled. Science and technology should not forget India's millions of children, blind, some deaf-mute and some spastic, so that they too could lead a fruitful life. Scientists and technologists should design tools and equipment for them.

Mr. S. B. Chavan, Union minister for planning, pointed out that India had 2.5 million scientists and technologists, but this was not big compared to the country's population or its problems. Environment, he said, should form a crucial guiding dimension for plans and programmes in each developmental sector.

Mr. Chavan said programmes to increase public awareness about environ-

mental issues and stimulate public participation in environmental protection would be a key component in the sixth plan. Programmes particularly relevant to educational institutions would be taken up in the plan period.

## 'ECO-DEVELOPMENT' CAMPS

These, he said related to the organisation of 'eco-development' camps consisting of students of different universities and colleges and each camp would have a specific goal. Problems of health, sanitation, energy, nutrition and pollution demanded immediate attention. Science clubs could act as catalytic agents in this field, he added.

Among the speakers were the Karnataka governor, Mr. Govind Narain, and the chief minister, Mr. R. Gundu Rao.

About 200 scientific models developed by school children from different parts of the country are on display at the exhibition. These are among the best selected from state-level science exhibitions sponsored by the NCERT.

The exhibition has sections on agriculture, horticulture, farming, animal husbandry, conservation of environment, health, energy generation, astronomy, rural machinery and teaching aids.

Among the interesting models on display are processes to manufacture cement from paddy husk and sugarcane waste, a sugarcane crusher using wind energy, a non-electrical thresher, a steel plant, an electronic polling system, a sea-to-air missile and an automatic tap.

This is the second time that the national science exhibition is being held outside Delhi, the first having been organised in Bombay in 1979.



## DELHI ATTITUDE TOWARD WATER POLLUTION SCORED

Calcutta THE STATESMAN in English 21 Nov 81 p 8

[Editorial]

[Text]

LAST year, while replying to a query in the Rajya Sabha regarding pollution of the Ganga, the Union Minister for Tourism and Civil Aviation remarked that the holy river could not be contaminated as it purified everything that mingled with it. This note of pious optimism is still evident in the Government's attitude to the problem of water pollution which according to a recent study is fast approaching "crisis point". It is estimated that 70 per cent of our river water is unfit for drinking. Cows grazing by a rivulet skirting Bombay's industrial suburbs reportedly have five parts per million of mercury in their milk, the consumption of which over a period of time would lead to slow poisoning. All riverine life up to five kilometres downstream from Kanpur is said to have been destroyed by industrial effluents in the water, and, according to experts at the Central Fisheries Research Institute at Barrackpore, the annual catch from the Hooghly estuary has decreased by 70 to 80 per cent.

Apart from industrial wastes, 48 Class I and 66 Class II cities are said to be discharging raw sewage into the country's waterways, and the pollution level of major rivers in several States is feared to have reached an alarming level. The situation calls for prompt remedial measures.

But though the Control of Water Pollution Act was passed in 1974, and the Central Board for Prevention and Control of Water Pollution initiated a survey four years ago of all river basins, little has resulted except a plethora of laws and regulations more common in their breach than in their observance. An estimated Rs 5,000 crores is required to rid our rivers and coastal areas of pollution paucity of funds and staff often being cited by official apologists for the lack of progress in this area. What is even more disturbing is the fact that the Central Water Board has set pollution admissibility limits at levels much higher than recommended by the World Health Organization. On the plea of "not jeopardizing India's rapid and planned growth of industrialization", the WHO limits have been increased in some cases by more than 200 per cent.

Since its formation in 1974 the Board has registered cases against only about a hundred offenders, of which only four were penalized. Official apathy has led to the growth of a number of anti-pollution "people's movements" in several States. But useful though such movements might be in raising public consciousness, the vast scale of the problem requires an integrated, officially channelled approach.



## IMPACT OF INDUSTRIALIZATION ON RAINFALL DISCUSSED

Bombay THE TIMES OF INDIA in English 2 Dec 81 p 15

[Text]

PUNE, December 1.

**I**NDUSTRIALISATION and urbanisation do make an impact on the rainfall in a particular area, although no definite correlation has been established as yet, according to Dr. B. V. Ramana Murthy, director of the Indian Institute of Tropical Meteorology (IITM).

Dr. Ramana Murthy said here yesterday that there was nearly 20 per cent rise in rainfall in the Bombay region owing to the location of industries. In the Neyveli area of the Tamil Nadu also the rise in rainfall registered was 25 per cent. However, in the Tatanagar area, industrialisation has resulted in decreased rainfall.

The meteorologist said while Tatanagar had mainly steel units, the Bombay region had every type of industry. It could be said that any area in which the industries emitted gases such as sulphur-dioxide received a higher rainfall. However, after a certain stage, it had a reverse effect.

Dr. Murthy was giving the highlights of the three-day symposium on environmental physics, which concluded here last week. One hundred and twenty-two delegates from 44 research organisations from all over the country participated in the symposium jointly organised by the IITM, the department of space, the Indian meteorological department and the depart-

ment of atomic energy.

Dr. Murthy said there was coordination between theoretical and experimental scientists, which helped get a better understanding of the recent developments in environmental physics and the atmospheric boundary layer and in identifying priorities for future research.

At the symposium, speakers stressed the need for remote-sensing measurements of meteorological parameters and air pollutants affecting the atmospheric boundary layer. Installation of Doppler acoustic radars at airports for measuring low-level clear air turbulence for increasing the safety of flying was also suggested.

Owing to hazards of air pollution, they wanted the constitution of a unit to coordinate research in this field and to assess the pollution.

Dr. Murthy said a study of the atmospheric boundary layer would help find out why Bombay TV viewers sometimes received programmes from Kuwait. Pune viewers from Pakistan and those at Visakhapatnam from Burma.

Referring to the possible impact of pollution on the Taj Mahal, he said a study was made on the wind flow from the Mathura refinery towards Agra. However, the level of pollution was not known. (Agra was 60 kilometres from Mathura and the wind flow was towards Agra for nine months of the year).

CSO: 5000/7022

## CONFERENCE ON FLOOD DISASTERS OPENS IN DELHI

New Delhi PATRIOT in English 4 Dec 81 p 10

[Text]

**T**HE need for large-scale afforestation to prevent floods, soil erosion and drought was stressed at a three-day international conference on flood disasters which opened in the Capital on Thursday to find an effective and suitable solution to the problem.

The conference, being attended by experts from several countries, went into deliberations after inauguration by Agriculture Minister Rao Birendra Singh who called for detailed studies and plans to check the menace which had been adversely affecting the national economy.

He told the delegates that while one-third of the country's land was affected by severe droughts, one-eighth was hit by floods. Some of the backward areas, he said, were those which were flooded every year as in parts of Uttar Pradesh and Bihar.

There was need not only for preventing the floods but also for ensuring quick relief measures, he said. This could be en-

sured through better co-ordination among the concerned departments.

Mr Singh pleaded for external aid to developing countries like India to manage their water resources for better use. There was need for taming the peninsular rivers in India.

Prof K G K Menon, president, Indian National Science Academy, which has organised the conference, stressed the need for afforestation of the fast-growing varieties because deforestation was the main reason. Forests, he said, checked droughts by inducing rains and soil erosion and floods by arresting the flow of water.

He regretted that the problem of floods was being treated lightly. He called upon all concerned to make full use of the scientific and technological developments for flood forecasting and computer modelling which enacted in advance a complete picture of the impending disaster. Likewise, data platforms could be set up to forecast floods.

## AGRICULTURE MINISTER TELLS CONSERVATION PLANS

Calcutta THE STATESMAN in English 1 Dec 81 p 9

[Text]

NEW DELHI, Nov. 30.—The Minister for Agriculture, Mr Birendra Singh, told the Lok Sabha today that the Government was "thinking of several serious measures" for soil and water conservation, protection of the environment and afforestation.

The Government was very strict about conversion of forest land for non-forestry purposes, and there was complete coordination between the State Governments and the Centre over the matter.

Mr Birendra Singh was answering supplementaries to a question on the problem of silting of dams and the need for soil conservation measures.

He agreed with a member that the rate of siltation in certain dams had increased because of deforestation. The member, Mr R. L. Bhatia (Congress-I) had mentioned that in dams such as the one at Bhakra, siltation was assuming very serious proportions and that in the Ram Ganga project siltation was 450% more than had been originally provided for.

The original question, put by Mr Bhatia, was about newspaper reports calling for a new service to save the Himalayas highlighting the problem of silting of dams and the need for soil conservation measures.

The Agriculture Minister told him that the Government was concerned over the problem of soil erosion and land degradation in the hill areas resulting in silting of reservoirs and recurring floods. To meet the problem, special emphasis was being laid on programmes of soil and water conservation, protection of the environment and afforestation. Some important schemes were already being implemented with Central assistance.

In order to conserve and restore the Himalayan eco-system, a centrally-sponsored scheme called "Soil, Water and Tree Conservation in the Himalayas" has been in operation since the Fifth Plan.

A Centrally-sponsored scheme called "Scheme of Soil Conservation in the Catchments of River Valley Projects" has been in operation since the Third Plan to reduce silting of reservoirs and degradation of their catchments.

To check the hazards of recurring floods and sedimentation and to increase the retention capacity of the watersheds, a Centrally-sponsored scheme of Integrated Watershed Management in the Catchments of Flood-prone Rivers of the Indo-Gangetic Basin" was launched during 1980-81.

A Central sector scheme has been in operation since the Fifth Plan to control shifting cultivation in the hill areas of the North-East.

Mr Birendra Singh said that in the State sector, the States concerned were taking soil conservation measures under their own schemes and programmes.

He mentioned that, recently, the Central Department of environment had set up a national eco-development board with the main objective of identifying the critical eco-systems in the country, specially in hilly regions, and to prepare operational blueprints of projects for ecological reservation in an integrated manner. The board would adopt a multi-pronged approach which would include constituting eco-development task forces drawn from ex-servicemen and organising eco-development camps to enlist the support of the youth force. This would be done in close collaboration with the State Governments.

CSO: 5000/7021

## ENVIRONMENTALIST REPORTS DANGERS FROM EROSION

Bombay THE TIMES OF INDIA in English 30 Nov 81 p 20

[Text] New Delhi, November 29 (UNI):--Mismanagement of the country's land and water resources has led to an environmental threat of alarming proportions, according to a 'draft report' prepared by Mr. V. B. Vohra, chairman, National Committee on Environmental Planning and Co-ordination (NCEPC).

Of the total land area of 304 million hectares, as much as 175 million hectares are exposed to serious environmental threat, says the report which would be discussed by the committee on December 19. The main cause are water and wind erosion, and waterlogging. Water and wind erosion alone has affected 150 million hectares, as fertile land.

According to the report, India was losing more than 6,000 million tonnes of topsoil per annum in 1972, which in terms of major nutrients alone--nitrogen, phosphorus, potassium--represented an annual loss of Rs. 700 crores. "Today the loss is many times more," the report adds.

The land area affected by floods had doubled from 20 million hectares in 1971 to 40 million hectares now and, according to the report of the "national commission on floods (1980)", the losses on account of floods in the last five years averaged Rs. 1,000 crores a year.

The report points out that soil erosion causes premature siltation of tanks and reservoirs. Though it is not possible to quantify such losses, the colossal investment of Rs. 10,000 crores on such projects is some indication.

The threat in this case is of particular importance because "alternative sites for storage are just not available to build new reservoirs in place of those which go out of commission".

The report says that only 12 per cent of the country's land surface is actually under adequate tree cover, as against the target of 33 per cent prescribed by the national forest policy, formulated in 1952.

CSO: 5000/7020

## MINISTER TELLS FOREST CONSERVATION PLANS

Madras THE HINDU in English 20 Nov 81 p 16

[Text]

NEW DELHI Nov 19

The Government proposes to make the law against deforestation stringent.

Rao Birendra Singh, Agriculture Minister, told a meeting of the Consultative Committee of Parliament for the Ministry of Agriculture that a comprehensive legislation with this object in view was proposed to be brought forward shortly.

The proposed law would also provide for State trading in forest produce, thus eliminating contractors from the scene. It would provide for summary eviction of encroachment from forest areas and would seek to promote social forestry and farm forestry programmes, the Minister said.

He described the enactment of the Forest (Conservation) Act, 1980, as a landmark in the effort to conserve the country's forest wealth. Under this Act, State Governments were barred from putting any forest land to non-forest use without the permission of the Centre.

**Ecological imbalance**

The Minister said about four million hectares of forests had been deforested during the past three decades. This had created an ecological imbalance, with adverse effects on the agricultural potential.

The Minister said that as against 5.7-lakh hectares covered under the social forestry programme in the Fifth Plan, the Sixth Plan target was 15-lakh hectares. This would meet the demands for fuelwood, fodder and timber for domestic and agricultural purposes.

The two-pronged plan of action for promoting social forestry, the Minister explained, was that while the States took up this work under their own Plan resources, a Centrally-sponsored scheme had also been initiated this year to promote such forestry in 100 selected districts where fuelwood shortage was acute.

He said free seedlings would be supplied to farmers, as also to children under "a tree for every child" programme to induce people to plant trees around their homesteads and farms.

**Training of staff**

The Minister said the Indian Institute of Forest Management, Bhopal, the New College Dehradun, and the Forest College, Coimbatore were expected to train the growing number of Forest Department personnel.

An Institute of Wildlife Management, Training and Research was proposed to be set up in the current financial year.

CSO: 5000/7018

## REDDY DECRIES RECKLESS DEMOLITION OF FORESTS

Bombay THE TIMES OF INDIA in English 21 Nov 81 p 9

[Text]

BANGALORE, November 20.

**R**ECENTLY, the President, Mr. Santiiva Reddy, flew over the Himalayan ranges between Kulu and Palampur and found that the hilltops had been cultivated and the forest had disappeared.

Mr. Reddy today highlighted this experience to show how forests were being denuded recklessly. Trees even on hilltops were disappearing, not only because of cultivation but because the contractors, who could take their lorries right up, found the sale of trees very paying.

He had asked the chief minister of a northern state recently what had been done to stop the denudation of forests, he said. He was told that there was an act to prevent the felling of trees. "But you cannot post a policeman for every tree." The act would be useless unless alternatives were provided to the people.

The President was inaugurating a Rs. 40-lakh "Aranva Bhavan", the new centralised building of the Karnataka forest department.

Mr. Reddy recalled the late Mr. K. M. Munshi's "Vanamahotsava" programme, which he had once described as a paper plan and not practicable. As a minister in Madras years ago, he was invited to plant a tree in the same place where he had planted a tree the previous year, which meant that the earlier tree had

not survived. He had declined the invitation, something more sincere than symbolic was necessary, he said.

The President pointed to the widespread problem of siltation. Because of unplanned cultivation even on hills and the removal of trees, soft earth was swept into the rivers with the first rain. He gave the instance of the Nagarjunasagar reservoir which had lost 65 per cent of its storage capacity in 35 years because of silt. The rate of silting in the Mayurakshi reservoir was three times more than originally envisaged.

In contrast, Mr. Reddy said, it had been observed in the U.S. that the flow of silt could be reduced by as much as 90 per cent in the catchment area if it was heavily forested.

In India, there was an investment of Rs. 20,000 crores in irrigation and power projects. "If we are to derive anything like the estimated benefit from the investment, we must prevent the rapid siltation of reservoirs by restoring forest growth."

Mr. Reddy pointed out that Karnataka, was fortunate in having valuable flora and fauna. These had to be preserved.

A familiar visitor to Bangalore, the President noted how in the last ten years the "sweetness" of the city had disappeared with the increasing growth of slums and fewer trees around. "Something has to be done," he remarked.

## SUCCESS IN RECLAMATION OF SALINE SOIL REPORTED

Bombay THE TIMES OF INDIA in English 12 Nov 81 p 6

[Text]

AHMEDABAD, November 11.

**A** SILENT but successful experiment is going on in Gujarat on Akali soil reclamation. The harbinger of this experiment, Gujarat University, in co-operation with voluntary agencies and other private agencies, has in the last five years reclaimed nearly 2,000 acres of saline lands in 200 villages in the state.

Deviating from the gypsum method for such reclamation work, the university took up what is known as the sulphuric acid method, by using industrial wastes from dairy, dyes, fibres and organic units as the basic raw materials.

This acid method reclaims saline alkali soils in ten days. The method involves spraying of "panchamrut" powder (named after the mixture of iron, sulphur, gypsum, calcium sulphate and calcium silicate) which helps water penetration.

The sponsors of the experiment yesterday took a press party to Tamba village, near here, where the university has applied its technique on nearly three acres of land. The acid-method users of the village are assured of at least 125 per cent more grain output.

**EASY, CHEAP**

Prof. K. S. Shastri, vice-chancellor

of the university, and Prof. M. N. Desai told newsmen that not only was the acid method easy in application but was also very economical. An acre of land required only an initial investment of Rs. 500, as against Rs. 1,000 in the gypsum method.

Some of the statistics speak for themselves: the farmers who have been persuaded to adopt this method are able to reap 85 maunds of paddy, as against the earlier output of 35 maunds in a given plot 45 maunds of wheat against 21 maunds, 18 maunds of cotton against eight maunds, nine maunds of bajri against 50 maunds, 100 maunds of jowar against 50 maunds, and ten times more jeera.

Mr. Hiralal Bhagwati, chairman of the textile traders co-operative bank, which has assisted on the university in this venture, stated that at least 100 farmers had been economically uplifted because of the improved performance of their land. Prof. Shah, who had extensive training in Hungary, stated that Gujarat and some other parts of the country, like Uttar Pradesh, suffered from saline soils. The problem was acute in the coastal areas of Gujarat.

The idea had not yet caught the imagination of the farmers, who continued to be traditional in their approach, he added.

CSO: 5000/7016



## BRIEFS

PUNE AIR POLLUTION--Pune, December 1--Ailments caused by air pollution are on the increase in some parts of Pune, Mr. S. G. Gadkar, an expert on pollution, said yesterday. He said blood examination of citizens residing in the area near the confluence of the Mula and Mutha rivers and the Engineering College had revealed the presence of 50 to 60 milligrams of lead in 100 cc. blood. Mr. Gadkar was speaking on "purification of industrial waste water" at a meeting organised by the Institution of Engineers and Dnyaneshwar Vidyapeeth. As a result of this pollution, Mr. Gadkar said, there were complaints of stomachache from the students residing in college hostels. Analysis of the drinking water consumed by them had showed no presence of lead. This showed that lead was present in the air they inhaled, he added. [Text] [Bombay THE TIMES OF INDIA in English 2 Dec 81 p 15]

CSO: 5000/7023

## BRIEFS

**RICE TERRACES PROTECTION--**Banawe, Ifugao--The government has earmarked P2.7 million to finance a massive tree-planting covering the entire Ifugao to save the 3,000-year old Banawe rice terraces from possible destruction. Local residents and officials have expressed fears that unless the drying up and erosion of the Ifugao mountain ranges are checked, the world famous rice terraces would not last for the next 20 years. Drying up of mountain ranges protecting rice terraces was traced to kaingin farming (burning of forests for firewood and wood-carving industry) and illegal logging. Banawe Mayor Benjamin Cappleman told visiting newsmen here that there has been a conflict between the old and new generations of Ifugaos on the preservation of rice terraces. While old Ifugao farmers go all out to protect and preserve surrounding forests, their younger counterparts have resorted to kaingin farming "as an easier way to earn a living." The young Ifugaos, lured by modern ways of living, have found farming in the rice terraces "less promising." [By Mel Parale] [Text] [Manila PHILIPPINES DAILY EXPRESS in English 23 Nov 81 p 3]

**MINE WASTES THREATEN TOWNS--**Baguio City, Nov. 19--Immediate government action is sought to save some 25,000 hectares of fertile riceland in ten towns of Pangasinan and La Union from pollution. Regional Director Romeo Roque of the national irrigation administration, urged remedial measures should be taken to stop the pollution and siltation of Agno and Amburayan rivers to protect the rich agricultural area which had an annual rice production capability of 1.5 million cavans. The NIA official traced the source of pollutants and siltation from the operations of several Banguio mining firms which discharge their "tailing" or industrial wastes to the rivers. Director Roque said the problem can be solved without the necessity of closing the mines if the national government can allocate an additional P1 million yearly to maintain the irrigation networks built by NIA. He disclosed that in Pangasinan alone, every year 1,000 hectares of riceland is added to the total area which cannot be planted to rice crops because of siltation. Roque proposed that the mining companies should coordinate with NIA to minimize the contamination of the rivers which serve as water source for the irrigation systems. Also, the NIA constructed several communal irrigation canals to uplift the economic level of some 50,000 cultural minorities comprising of Tingians in Abra and Igorots in Mountain province. Administrator Fiorelio Estuar is implementing successfully the irrigation program envisioned by President Marcos to make all regions self-sufficient in rice production. Meanwhile, Rolando B. Queliza, NIA physician, is performing a humanitarian service by extending medical assistance to farmers who are members of irrigators' association in various provinces of region I, it was bared. [By Romeo S. Movido] [Text] [Manila BULLETIN TODAY in English 20 Nov 81 p 23]

PESTICIDES POLLUTE BAY AREA--Pollution of the Manila bay area is being caused by pesticides, fertilizers, and other farm chemicals from the farming areas of Pampanga and Bulacan. This was reported by metropolitan waterworks and sewerage system (MWSS) General Manager Oscar Ilustre in a press briefing on the last day of the 3rd Asia Pacific Regional Water Supply conference at the PICC. He briefed World Bank, ADB, and World Health Organization officials on the progress of the MWSS water supply and sewerage projects in Metro Manila. "About 60 per cent of pollution in Manila bay is being caused by farm inputs and urban run-off from the Manila area and not from the sewage and drainage systems," said Ilustre. Ilustre announced that very soon, water supply project III will be started to augment the present 350,000-million gallon capacity of the MWSS for the Metro Manila area. He said the project will increase the present capacity to 600,000 million gallons in a period of one and a half year. Included in the project is the rehabilitation of seven sewage pumping stations in the city and a sanitation component covering the construction of public toilets, removal of sewage and waste matter in the streets, and installation of more drainage pipes. He said, his agency is enlisting also the help of the 300,000 septic tanks owners. During the press briefing, official international lending institutions like the World Bank-IBRD, the Asian Development Bank and the World Health Organization (WHO) lauded the Philippine water supply and development program for its practical approach. The officials, led by Donald Schoup and David Howarth said the Philippines has evolved a practical approach to water supply and development. [Text] [Manila BULLETIN TODAY in English 17 Nov 81 pp 1, 4]

CSO: 5000/4907

REPORTS OF WATER CONTAMINATION ALARM OFFICIALS

La Paz ULTIMA HORA in Spanish 20 Nov 81 p 6

[Text] The contamination of the water which serves to supply the SAMAPA [Municipal Waterworks and Sewage Service] of the city of La Paz should be the concern not only of that body, but also of the government authorities, because of the vastness of the problem, in which the bodies which are supposed to see to the health and welfare of the country do not appear interested, it was learned during a press tour of the Milluni region.

The SAMAPA study seminar for the press of La Paz made it possible to become familiar, during an extensive visit to the Milluni Grande and Milluni Bajo basins, with the ecological problems existing in the region due to the mineral wastes created by the COMSUR mine, which has functioned in the region for many years.

The technical explanation provided by engineer Marcos Arce, head of the plants division of the SAMAPA, was supplemented at the site, where ore washings have practically taken over the dam lake and pipes which supply a large part of the city of La Paz.

"The contamination of the water is so great that neither birds nor fish, much less vegetation, can live here," engineer Arce said, as he used a portable laboratory to demonstrate the "mineralogical components" of the water in the region. The barrenness of the Milluni lacustrine sectors is so extreme that the sediment has piled up to a height of more than a meter and a half, such that one can see from a distance a desert lacking vegetation, and the ferrous water which has left its trail of oxide on the banks of the rivers and smaller lakes, eliminating every vestige of human life.

The laboratory tests generally yield residual samplings of silver, lead, copper, arsenic or pure copper sulfate.

Engineer Arce expressed regret that this problem has dragged on for many years, particularly during this decade dedicated to water, as was decreed by the UN last year.

The problem of controlling contamination should involve not only the SAMAPA but also the Ministry of Urban Affairs and Housing, the Ministry of Mining and Metallurgy, the Ministry of Health and the municipal council, which will be the owner of

the Milluni dam, for which the COBEE [Bolivian Electrical Energy Commission] is currently responsible, until 1990.

However, the SAMAPA continues to work steadily, particularly on the treatment of th's water. It has a substantial budget for making the water drinkable and its efforts are constant, although few citizens or consumers are aware of the problems encountered by the technicians in providing potable water to La Paz within the quality indices established by the World Health Organization, which paradoxically lists the SAMAPA among the enterprises (of which there are very few in the world) which treat water so heavily contaminated by a mining center. It deals with a problem which exceeds technical norms and involves the strict requirements of conscience and humanitarian concern on the part of the users of this liquid.

Since there are no other options, the SAMAPA considers that the construction of a canal by the COMSUR is an urgently needed alternative, in order to compensate for the cost of making the water drinkable and the ecological damage to the region. Although these are not its responsibility, it could take this action out of a natural desire to protect lives and insofar as it can, health.

Engineer Marcos Arce described the technical facilities of the enterprise as unusual for the country, since it has electronic controls for detecting faults, sophisticated purification systems and, in addition, highly trained personnel characterized by good will which goes beyond what could be termed the duties for which they are paid.

"We have a commitment to our profession, to the SAMAPA and to our customers, and therefore the work we do, Sundays and holidays included, although it means the loss of leisure time, inspires us to keep up the same rate of work. This is the reason for our concern about the contamination of the Milluni waters, since the sums spent in order to make this water polluted with washings drinkable could be used to broaden the networks throughout all of the highlands and other peripheral zones," Arce said.

5157

CSO: 5000/2024

ENVIRONMENTAL PROTECTION RESEARCH ACTIVITIES CITED

Kuwait AL-QABAS in Arabic 16 Oct 81 p 4

[Article by Ghazi Jarradah: "The Arab Gulf Is One of the Areas of the World Most Exposed to Pollution"]

[Excerpts] With regard to the Arab Gulf, Dr Fikri said: "The Arab Gulf Basin is regarded as one of the areas of the world most exposed to pollution problems in general. This arises for a number of reasons, principally the huge scale of oil activities in the area, whether exploration, production, transport or processing, in addition to the continued increase in population and the attendant increase in the size and character of development activities."

He pointed out that one can get an idea of how serious the problem of pollution is in Kuwait and the Arab Gulf if one takes several points into consideration, including:

The fact that the Arab Gulf is the only body of water in the area which handles the wastes of all the surrounding countries.

The shallowness of the Gulf waters and its special geographic and climate characteristics which are conducive to the accumulation of pollution in the area.

The exploration and production activities currently underway in the waters and the fact that it is viewed as a means of transport for petroleum products.

And, finally, the continually increasing size of petroleum and non-petroleum industries located on the shores of the Gulf.

Water and Air

He said that the threat looms larger if we recognize that the Gulf represents the principal source of drinking water for the countries of the area and its fish resources represent an important local source of protein.

In addition, we must not forget that the air of Kuwait is heavily exposed to environmental pollutants with automobile exhausts constituting a large share of these pollutants. One thing making this more serious is the fact that gases resulting from the incomplete combustion of automobile fuels is regarded as having a negative effect on public health. Moreover, there are health problems arising



from dust storms as the result of inhalation of air loaded with dust particles and accompanying harmful matter. Recent studies have established that this dust assists in the dispersion of chemical and animal pollutants.

Regarding Kuwait's role and responsibility in regional environmental protection, Dr Khalaf stated:

"Preserving and protecting the environment and its component elements from any harm that might effect it is, in reality, a major responsibility with the major burden falling on the shoulders of governments. With the increasing interest in the environment and in developing it and the serious attempts which are being made to cope with its problems, the advanced countries have begun to take a serious look at the tasks of managing the environment, serious enough that some now have ministries for managing the environment."

Kuwait has recognized the importance of directing efforts toward protecting the area's environment, particularly during that period of its developmental process which has been characterized by dynamism and rapid evolution in many industrial and production areas. Accordingly, ever since the 60's, Kuwait has moved toward implementing development projects characterized by having been steered toward environmental protection. It has also played a leading role in increasing awareness of protecting the environment of the area. This has arisen from a belief on its part that Kuwait's environment does not stop at political borders but is to be considered an inseparable part of the environment of the Arab Gulf basin. With regard to the role of the Kuwaiti Scientific Research Institute, he said:

"In this context, the role of the Kuwaiti Scientific Research Institute is to be a tool for scientific research which cooperates with other quarters concerned with environmental protection in order to reach the desired goals. The fact is that the institute has from the start focused all its efforts around creating personnel skills and providing the capabilities needed in the environmental field with the idea of bolstering the state's own capabilities in this regard. The institute has moved into the stage of becoming versed in studies aimed at defining the most important factors arising from the interaction of society with the environment and at ascertaining the facts about specific environmental factors by which it can be possible to move toward achieving the necessary solutions.

"In the field of environmental science, the institute has, during the past 3 years, directed the efforts of the section toward developing personnel skills and scientific capabilities in preparation for providing active assistance in projects on studying the marine environment which are to be carried out soon on the regional level. In this field, the marine pollution program now has the capabilities needed to study chemical and biological pollutants in the waters of our marine environment.

"In this regard, we can mention by way of example some contractual projects which the department is preparing for government bodies, including a study of chemical and bacterial pollution along the shoreline of Kuwait City, a study of pollution caused by industrial drainage in the al-Shu'aybah area and a project for an environmental impact study of digging and landfill operations in the maritime area of Kuwait City.

"In the desert environment, we all know the problems of the dust storms and desertification. In this regard, the department is carrying out a project to study



the sources of and deposits left by dust storms and the advance of desert sand into urban and agricultural areas. The department is also employing remote sensor technology to evaluate the desert environment as it is now using information obtained from satellites to classify the various desert sedimentations."

He stated that the hydraulics and coastal engineering group is now handling several projects, most importantly the program to study thermal pollution of the al-Shuaybah industrial area. This program has been divided into three stages. The first is to survey the marine depths and to prepare a map in detail of the area. Efforts in the second stage have been focused on collecting field information on the hydrographic characteristics of the area and designing a computer model to pattern the effect of thermal pollution on the water drawn from the area to be used as drinking water after desalinization. It should be noted that these two stages have been completed with full success. Preparations are now underway to build a topographic model of the area.

In addition to this, the hydraulics group has designed a mathematical model to understand the dispersion and deposits left by dust storms in Kuwait. The group is providing technical advice to a number of governmental quarters in the area of hydraulics and coastal engineering.

Regionally, the Department of Environmental Science is providing active assistance in preparing Kuwait's working plan which is aimed at implementing two sets of research projects to study and evaluate the marine environment in the Arab Gulf area. The section has also helped to make some environmental studies of the coastal area of the Sultanate of Oman in cooperation with the UN environmental program.

8389

CSO: 5000/4702

CONTINUED SEA EROSION THREATENS BEIRA BEACH

Beira DIARIO DE MOCAMBIQUE in Portuguese 28 Oct 81 p 2

[Text:] Slowly but surely the sea is taking away land along Beira's extensive beach.

Looking toward the past, present and future, we cannot help but ask ourselves the question: Will Beira not some day be drowned out by the gradual advance of the sea?

Although the official statistics indicate that in 1970 Beira was 7 meters above sea level, now that a decade has passed, it would not be an exaggeration to subtract 2 or 3 digits from that percentage. A glance at the beach which extends from Ponta-Gea to the Macuti lighthouse, a distance of about 6 km, gives us a desolate picture of what Beira will be like if appropriate measures are not taken to preserve the beach.

There are ruins of walls along the beach--cave-ins caused by the fury of the waves; there are remains of tree trunks which, in the past, served to hold the land in place and prevent the water from advancing; there are ruins of protective wire nets which served in the past to call attention to areas dangerous for swimming and also protect mankind and nature; and there are ruins of houses whose walls were invited by the sea to share the aquatic environment forever.

During the months when the sea reaches its maximum height, there are parts of the city where one cannot pass. And when the water recedes, it takes with it streets, trees, walls, posts and many other things produced by man's sweat.

A large part of the levees, those imposing reinforced concrete walls which line an extensive area along the beach and serve to weaken the force of the waves, have been broken up by the fury of those waves and therefore fail to serve the purpose for which they were built.

Not long ago, representatives of provincial organizations and Beira's city officials met to discuss and seek solutions to problems affecting Beira and its people; high on the list of problems was the preservation of the beaches and the practical, urgent and effective measures which have become necessary.

Another aspect of this sad scenario of the invasion of the land by the sea is the filth which characterizes the entire sandy part bordering the sea where, without exaggeration (the Estoril beach is a classic example), it is necessary to scratch the land, like a chicken, to find a place to "camp" without the danger of being pricked by broken tree limbs and other odds and ends which have been accumulating with the passage of years and never removed.

8568

CSO: 5000/5624

## BRIEFS

OIL SPILLAGE MEASURES--Oil companies in Nigeria may be required to deposit a stipulated amount of money against any eventuality of spillage or pollution, if the Senate accepts the recommendations of its petroleum and energy committee. The committee said in a report already tabled for Senate's consideration that such a system was operating in Canada, and recommended that a more detailed study of the system should be carried out by the Nigerian government. The committee's report and recommendations are the outcome of its visits to six oil producing countries abroad. It said that when the oil industry was nationalised in Venezuela, there was no exodus of the industry's foreign technical and managerial personnel. It suggested that the Venezuelan experience should be studied carefully, as Nigeria could benefit from it if and when the country decided to nationalise its oil industry. Another recommendation by the committee is that the Nigerian National Petroleum Corporation (NNPC) should, like its counterparts in other countries, pay competitive salaries to its employees to attract and retain the right calibre of technicians. The committee said that the NNPC Re-organisation Bill recently passed by the National Assembly was in line with what operated in all the countries it visited. [Text] [Kaduna NEW NIGERIAN in English 12 Oct 81 p 1]

CSO: 5000/5631

## BRIEFS

OIL CLEANUP EQUIPMENT DEMONSTRATION--(APS)--A demonstration of anti-pollution and oil recovery equipment was held on Saturday morning at the national naval dock. The equipment was developed by a British company. The system uses a belt to which cords with oil-attracting fringes are attached, along with hydrophobes (which reject water), to soak up the oil from the water, taking in one and ejecting the other. The British firm that developed the system has already participated in a large number of technical aid operations, particularly the removal of fuel oil from rivers in northwestern France after the Amoco Cadiz spill on the coast. The operation follows the decision made by the prime minister at the National Council on City Planning meeting held on 13 July, asking the minister of urban affairs, housing and the environment to study an emergency program to fight pollution. In a meeting with the SENEGALESE PRESS AGENCY, Amadou Demba Diop, director of the environment, indicated that protection of the environment is a top priority for the minister of urban affairs, housing and environment and emphasized the importance of the subject for Senegal, which has 700 kilometers of coastline and which has considerable oil tanker traffic. That is why the government decided to set up an emergency plan of action to follow in case of an accident involving massive pollution by hydrocarbons or other substances. Diop recalled that Senegal has supported the plan of action adopted by the conference of Western and Central African Nations for the protection and development of the marine environment and coastal areas in Abidjan. [Text] [Dakar LE SOLEIL in French 23 Nov 81 p 4] 11,464

CSO: 5000/5629

# MEASURES TAKEN TO PREVENT POLLUTION OF THE SEA

Moscow GAZOVAYA PROMYSHLENNOST' in Russian No 9, Sep 81 pp 16-17

[Article by E. Kh. Vekilov, Glavmorneftegaz: "For Cleanliness of the Sea"]

[Text] The problem of environmental protection has become one of the most important national tasks because of the accelerated development of the scientific and technical revolution and the rapid rise of industrial production.

The concern of the state for environmental protection is reflected in the Basic Law of our country, the USSR Constitution, which indicates: "In the interests of the present and future generations in the USSR, the necessary measures are being taken for the protection and scientifically substantiated and efficient use of the earth and its depths, water resources, plant and animal world, for preservation of the cleanliness of the air and water, guaranteed reproduction of natural resources and improvement in man's environment."

Guided by a striving to preserve and multiply the country's natural resources for future generations, the CPSU Central Committee, USSR Supreme Soviet and USSR Council of Ministers have made a number of important decisions in recent years which are aimed at a further improvement in environmental protection and the efficient use of natural resources.

The requirements for environmental protection on the water areas are distinguished by their specific nature, since the interests of the Ministry of the Gas Industry, USSR Ministry of Water Management, USSR Ministry of the Fishing Industry and the USSR Ministry of Public Health conflict here.

Many water areas of the World Ocean have been so polluted in recent years that practically irreparable damage has been done to the local fauna and flora. The offshore oil and gas explorers are consequently faced with the task of preventing the discharge of untreated deposit water, solid wastes, drilling washing liquid, chemical reagents and other possible pollutants.

The accumulation by hydrobionts of harmful components of oil and petroleum products causes a special problem. They can be transferred on the food chain to man without undergoing any changes in the process.

Considerable experience has been accumulated by now in the area of environmental protection in the Caspian, Black and Azov Seas where a technical-technological complex of measures has been introduced which exclude the discharge into the sea of deposit waste water and production wastes during the drilling and operation of oil and gas fields, as well as completely excludes the lethal effect of geophysical operations on the ecological system of the water areas. These measures are multifaceted and encompass all aspects of the process of developing offshore oil and gas fields.

When seismic methods are thus used to explore all the seas of the USSR, pneumatic, electric-spark sources and gas mixtures are used instead of explosives. The former do not inflict any damage on the ichthyofauna.

Construction of all stationary platforms and trestle platforms is done with a hermetically sealed metal and reinforced concrete flooring, with drip pans at the sites of possible leaks of pollutants and flanging of the platforms.

During drilling, all the drilled-out rock, residues of chemical reagents and fuel and lubricants are carried off in hermetically sealed containers to the shore and stored in sludge dumps especially set aside for this purpose.

The main source of pollution during the operation of the fields, deposit water, is either used in the system to maintain formation pressure, or is pumped into absorbing wells. As a result, discharge of waste water into the Caspian Sea, rivers and reservoirs of the Azov and Black Seas has been completely stopped.

It is common knowledge that one of the most important factors for ecological equilibrium of the environment is nonpollution of the atmosphere with gaseous hydrocarbons. A lot of attention is therefore focused on recovery of the extracted gas. It is enough to say that in 1980, the highest percentage of gas recovery, 99.4% of total extraction, was reached at the Caspian Sea fields alone.

Special attention is given to the fleet that services the drillers and oil and gas extractors. The fleet of ships is equipped with vessels for the collection of bilge and fecal water, separators to purify the oil-containing water, sewage disposal systems and other equipment to prevent pollution of the sea. It is planned to update the fleet in the 11th and subsequent five-year plans to meet all IMCO [Intergovernmental Maritime Consultative Organization] requirements in the area of environmental protection. The ship fleet includes an oil and garbage collector developed by the scientific research and planning institute "Gipromorneftegaz" which is successfully operating in the Azerbaijan sector of the Caspian Sea.

The offshore oil workers focus a lot of attention on the construction of environmental protection facilities. Environmental protection facilities with output of 40,000 m<sup>3</sup> per day were built and started up during the 10th Five-Year Plan. The most important facilities are the enlarged oil-collection points 1 and 2 in the Oil and Gas Extracting Administration imeni 22nd CPSU Congress (Neftyanyye Kamni) and the pressure sewage system on Artem Island (Caspian Sea) with output of 8,000-10,000 m<sup>3</sup> per day.



In addition to the aforementioned measures, the Gipromorneftegaz has developed and tested a unit to collect, neutralize and recover the drilled-out rock by electrothermal method, units to burn products of the exploratory wells and to clean the bilge water, a hydrocyclone unit for washing the sand plugs on a closed cycle, and technological block units BT-16 and BT-100 which are designed to collect waste water in technological operations.

Constant research to study the effect of the process of constructing stationary platforms, drilling and servicing the oil and gas exploratory fleet on the ecosystem of the USSR shelf plays an important role in the rapid development of a set of measures to protect the sea from pollution. Sets of biological, hydrochemical, geochemical studies done in the Black Sea have thus demonstrated that when measures to protect the environment and high labor discipline are observed in the drilling process, not only is the environment not polluted, but activation of biological life is observed.

Organizational work done on all the water areas among the technical personnel of the offshore oil workers is also very important. This work includes propagandizing knowledge in the area of ecology, participation in socialist competition on environmental protection questions, and the use of administrative and disciplinary measures of penalizing the violators of water-protection measures. The number of public inspectors among the oil workers themselves is increasing. They help the state water and fish protection to find those guilty of polluting the sea. Lightly of these inspectors were working in the Caspian Sea alone in 1980.

Intensification of work to protect the sea from pollution during drilling and extraction has yielded positive results. The maximum permissible concentration of hydrocarbons in the oil and gas extraction region does not exceed the standard. Taking into consideration the increased requirements for environmental protection, however, the offshore oil and gas extractors are faced with the following basic tasks:

creation of the optimal technical and technological complex to prevent pollution of the environment during drilling and operation for all the water areas of the USSR shelf;

manufacture of modern means of collecting, neutralizing and separating wastes, their removal from the objects and recovery;

production of technical means of monitoring and early warning of the possible pollution of the environment both for freezing and nonfreezing seas;

creation of a set of technical means and methods for localizing the consequences of emergency situations;

development of legislation, standards and other documents aimed at eliminating all the basic pollutants of both the water and the air;

study of the condition of the environment in the regions of drilling, extraction, transporting and storage of oil and gas, detection of sources of pollution of the sea by means of physicochemical and biological studies.



The realization of these measures will make it possible to fulfill those tasks that have been set before the offshore oil workers in the area of environmental protection by the 26th CPSU Congress.

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9035

CSO: 5000/5

# REVIEW OF BOOK ON PREVENTING OIL POLLUTION OF SEAS

Moscow NEFTYANIK in Russian No 8, 1981 p 40

[Review by L. Yevstratova of book "Prevention of Sea Pollution during Working of Offshore Oil Fields" [Predotvrashcheniye zagryazneniya morya pri razrabotke morskikh neftyanykh mestorozhdeniy] by N. A. Aliyev, Izdatel'stvo "Nedra"]

[Text] The publishing house "Nedra" is preparing the book of N. Aliyev "Prevention of Sea Pollution during Working of Offshore Oil Fields" for press.

Control of oil pollution of the water is one of the most important problems of today. This problem is becoming even more acute because of the rapid development of exploration and working of oil and gas fields on the continental shelf.

Based on an analysis of the published materials on exploration and working of oil and gas fields of the Caspian Sea, and domestic and foreign experience in the field of environmental protection, the book systematizes and classifies the chemical pollutants of the sea, covers the ways to create methods and technical means of preventing sea pollution during drilling, extraction of oil and gas, well repair, collection, preparation and transportation of the products.

The sections which treat the juridical, economic and organizational aspects of environmental protection present the practical experience of the foreign countries and the USSR in this area, tell about the laws and standards which can be used by different states to prevent pollution of the sea by oil and petroleum products, and present the results of the effect of petroleum products on fish, marine fowl and phytoplankton.

Since it is impossible to have 100% exclusion of the development of complications and accidents at sea, the operator must always have at hand effective means of localizing and collecting accidental oil spills.

The specialized administration for underwater-technical operations and protection of the sea from oil pollution is involved in eliminating the consequences of accidents in our country. The plans it has developed to eliminate accidental spills for each oil extracting enterprise include monitoring the condition of the water area, notification and signalling in case of a spill, as well as interaction with all the organizations who are using the natural resources of the Caspian Sea.

Wastes from well drilling represent a great danger for the sea. After examining all the possible variants of such pollution, the author comes to the following conclusions. All the exploratory (drilled from PBU [floating drilling platforms] and stationary platforms) and producing (on stationary platforms and trestle platforms) wells must be equipped with individual waste-treatment units. Centralized structures need to be built to recover wastes for a group of drilled wells located on a stationary platform, trestle platform and special ship, as well as shore treatment works to recover wastes transported from one or a group of drilled wells.

The book presents the technological block diagram for purifying the washing fluid of drilled-out rock, collecting and recovering sludge, and purifying the drilling waste waters and their re-use for the well to be drilled on a PBU, stationary platform and trestle platform. Technological plans are shown for mechanical, chemical and electrochemical purification of drilling waste waters.

All operations to separate the liquid part of the well product into oil and water at the oil-collecting points located on a trestle have been completely halted since 1968 in order to protect the environment from oil pollution. These oil-collecting points now fulfill the functions of intermediate pumping stations. Only separation of the product into liquid and gaseous phases is done at the fields. These products are transported on separate pipelines to the shore collection points. Final separation of the product and recovery of the wastes are done here.

A lot of space in the book is consequently devoted to questions of using hydraulic cyclones. The chief advantages of the hydraulic cyclones over equipment that does similar operations (mechanical classifiers, vertical settling tanks, hydroseparators, etc.) are high throughput, simplicity of design and low cost of manufacture, and more precise separation of the solid particles of small diameter.

Colleagues from the department of hydraulics and hydraulic machines of the AzINEFTEKHIM [Azerbaijan Institute of Petroleum and Chemistry imeni M. Azizbekov] have developed plans for vacuum-hydrocyclone units applicable to conditions of enlarged oil collecting points. The vacuum-hydrocyclone units not only provide for separation of sand from water, but also its washing of oil. This makes it possible to neutralize one of the main sources of sea pollution.

I would like to note that individual chapters of the book which is designed for engineering and technical workers, designers and builders of water-protection facilities, as well as students of petroleum VUZ's and departments may be of interest for the curious nonspecialist reader.

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CSO: 5000/6

## BRIEFS

ELEUSIS POLLUTION TO LESSEN--Environmental pollution will markedly decrease in the Thryasion Pedion in the vicinity of Eleusis when the level of sulfur dioxide from the Aspropyrgon state refinery will lessen as a result of the start of operations, as of next Friday, of the sulfur recovery unit installed in the refinery. According to a statement by Minister of Industry-Energy A. Peponis, the release of sulfur will decrease by 30 tons per day. As a result, environmental pollution from the sulfur dioxide released during the processing of crude oil and the production of oil by-products will decrease in the area. At the same time, the production of marketable sulfur will increase. [Text] [Athens I KATHIMERINI in Greek 5 Dec 81 p 2]

CSO: 5000/5305

## ENVIRONMENTAL GROUPS PLAN MAJOR CAMPAIGN FOR 1982

Stockholm DAGENS NYHETER in Swedish 12 Nov 81 p 36

[Article by Claes Sjoberg]

[Text] There will be a major campaign next year within the environmental and alternative movement in Sweden. At that time, the so-called alternative campaign will begin publishing a new weekly magazine, hold a global conference on the environment, and conduct a kind of tent project that will tour the country. The campaign involves not only traditional environmental issues, but also the struggle for a different society.

The new environmental campaign is now being criticized within the environmentalist movement, however. These are insignificant and misguided efforts and the involvement in alternative lifestyles sets the movement apart from society, according to critics. The traditional environmental work must not be left to the bureaucrats at the Environmental Protection Board.

The alternative lifestyle campaign will be the largest joint project within the Swedish environmentalist movement since the referendum on nuclear power. The idea is to show that the environmentalists and alternative movement in Sweden do not simply wish to say "no," but that they also have positive alternatives to the society they are criticizing. A number of organizations within the peace, women's, and environmentalist movements are making preparations for the campaign, the slogan for which will be self-reliance, solidarity, and conservation of resources.

Beginning early next year, a joint weekly magazine will be published by the Environmental League, the Friends of the Earth, Future in our Hands, the People's Campaign against Nuclear Power, and the Swedish Peace and Arbitration Association.

### Tent Project

The alternative movement will have a tent project that will travel throughout Sweden during the summer of 1982 and demonstrate windmills and solar panels, sensible clothing, energy-efficient houses, alternative cultivating methods,

etc. The tent project will attempt to show how many organizations, groups, and individuals are working on alternative projects in the fields of housing, production, energy, etc. It will also try to present a comprehensive picture of the society the alternative movement is striving to establish.

A global conference in Stockholm for spring 1982 is also being planned, in which researchers and environmentalists of the entire world will participate. In addition, studies are underway to make the Nordic countries more self-sufficient, primarily initiated by Erik Dammann of Norway, who started the movement *Future in our Hands*.

Since nuclear power disappeared as a rallying point, activities among environmentalist groups and what remains of the People's Campaign have dropped dramatically. More and more environmentalists are tired of simply being against something. They want an alternative to demonstrate. It is hoped that activities will pick up as a result of the alternative lifestyle campaign--just as they did before the referendum.

#### Too Little Environment

Now, however, there is criticism against this major campaign. The Field Biologists, who have become known as one of the most militant environmental organizations, do not wish to participate in the project. They believe it deals too little with the environment and too much with new lifestyles and personal development.

One of the most outspoken critics is Ulf Ivarsson. He has worked for many years in the Environmental League and was previously editorial assistant at *MILJOTIDNINGEN*. He resigned earlier this year, however, partly in protest against what he saw as incorrect tendencies within the environmentalist movement.

"There are strong currents of unscientific reasoning within the Environmental League," Ulf Ivarsson said. There is no effort to eliminate muddled reasoning. The organization is dominated by the New Age, nature romanticism, and mysticism."

*MILJOTIDNINGEN*, under the leadership of Ulf Ivarsson, was severely criticized by many environmentalists who said that the magazine was too negative and concentrated too much on environmental scandals. Now *MILJOTIDNINGEN* will cease publication when the new weekly magazine *VECKANS EKO* is started. This is a ridiculous decision, according to Ulf Ivarsson.

"The magazine has been an important source of facts for teachers and others involved in environmental issues. It is wrong to stop safeguarding the environment. Instead, we must increase continually our knowledge so we can confront authorities and businesses successfully."



"It is maintained that the organizations behind the new magazine share common interests. I doubt that. The Swedish Peace and Arbitration Association demands unilateral Swedish military disarmament. It is not certain that all environmental groups agree with this demand."

Too Hurriedly

Ulf Ivarsson believes that the entire alternative campaign was put together too hurriedly. There is not yet any comprehensive picture of the alternative society, he said.

Magnus Nilsson is on the environmental staff of the national radio company. He is a member of the magazine group Nature and Society and has criticized the alternative lifestyle campaign on several occasions.

"Such trivialities as cultivating your own food and sewing your own clothes do not win new members to the environmental movement. These are positive steps in themselves, but they fail to influence the development of society. There are many acute tasks within the traditional environmental movement. Government environmental protection is reduced whenever there is an economic crisis. Industry holds the trump card and destruction of the environment increases. In this situation the environmental movement chooses not to step up the struggle for the environment, but devotes itself to alternative lifestyles."

This criticism is rejected totally by chairman Lasse Herneklint of the Environmental League.

"We do not plan to drop our traditional environmental work. We are now in the final phase of work on a forestry and agricultural program. The Environmental League will soon take a position on which environmental problems are most acute and must be dealt with in 1982 and 1983."

"The environmental movement has grown so much and is so strong today that we can both demonstrate alternatives and work with traditional environmental protection."

The alternative lifestyle campaign and the new magazine have grown from the bottom up, according to Lasse Herneklint.

"The enthusiasm actually astounds us in the leadership. With regard to the magazine, we are taking no position whatsoever on the demand by the Swedish Peace and Arbitration Association for disarmament. The various organizations have agreed on a platform for the magazine."

All this platform states is that we will work for peace on earth. There are various means of accomplishing this, however. The magazine will be open even to those who believe that the best way to preserve peace is to strengthen the



Swedish military."

Ralph Mono is chairman of the Friends of the Earth and for many years he has advocated closer cooperation within the environmental and alternative movement.

"We need an overall view to understand the reasons for the destruction of the environment," he said. "Today the threat and crises are so serious that they threaten the survival of humanity. For this reason, it is important for all positive forces to work in the same direction and there are many points in common among the organizations included in the alternative lifestyle campaign."

#### Reaction

The increasing interest in the New Age is understandable, according to Ralph Mono.

"Large parts of the alternative movement are actually a reaction against a thoroughly materialistic society, a society in which only numbers are considered important. The Western view of nature is distorted and limited and it is time we began discussing these issues."

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MINISTER DEFENDS PROPOSAL TO TREAT LAKES HURT BY 'ACID RAIN'

Stockholm SVENSKA DAGBLADET in Swedish 3 Nov 81 p 15

[Article by Lennart Lundegardh]

[Text] Our ambition is to follow the study proposal for a massive program to lime the country's acidified lakes and streams. The program may be carried out at a slower pace.

Agriculture Minister Anders Dahlgren said this to SVENSKA DAGBLADET. A proposal will be made next spring to increase the present allocation for liming of 15 million and, at the same time, to make stricter sulfur emissions standards.

In a joint report, the National Environmental Protection Board and the Fisheries Board recently proposed that the allocations for liming lakes and streams be increased gradually according to the following timetable:

to 50 million in the fiscal year 1982/83 and to 75, 100, 150, and 200 million kronor in subsequent years. In addition, during the next fiscal year 6 million will be allocated for research on the effects of acidification on soil and groundwater. This figure will be increased gradually as well.

Slash 80 Million

At present, however, experts at the Agriculture Ministry are attempting to slash 80 million from the budget. Odds are that the liming effort will not reach the goal in the proposal.

The same is true of allocations for infringement compensation and the purchase of land for nature reserves. The current allocation is 20 million kronor.

"An increase in this allocation is out of the question," Anders Dahlgren said. "I am well aware of how important this item is and it is my intention to keep this allocation at the present level, but I can make no promises today."

Year after year environmentalists have sought in vain for a fauna protection

allocation in the budget and finance bill.

"This budget will also contain no such allocations," Anders Dahlgren said. New allocations are unthinkable in the present economic situation."

Does this mean that environmentalists may as well give up hope?

"Yes, in the near future, but not in the long run," Anders Dahlgren answered. "When the economy is back on its feet, a fauna protection allocation may come up for discussion."

#### Expansion Delayed

The present energy policy calls for so-called mini-power plants, i. e. the use of hydroelectric power from small streams.

"The expansion rate has been slower than I had imagined," Anders Dahlgren said. "Conflicts have arisen between various interests. Small, but locally important falls are disappearing and it is understandable that people are protesting. We must accept the fact that the mini-power plants will generate less electricity than estimated."

Anders Dahlgren puts his hope in alternative energy sources, primarily heat from water and from the earth along with heat exchangers.

If, in spite of everything, nuclear power is unavoidable, which would be preferable--nuclear heat of the Secure type or large nuclear power plants?

"That is a choice between the plague and cholera, but in that situation I would prefer large plants to small ones," Anders Dahlgren said.

#### Bogs a Test Case

A test case for how the government views the conflict between peat mining and environmental protection involves the Skarvsjo bogs, which lie near the inland railway south of Storuman.

"It is unfortunate that this is the first case on the agenda," Anders Dahlgren said. "New estimates seem to show that the area has greater natural value than was known when the plans were first developed."

"At the same time, there is no doubt that the Skarvsjo bogs are practically ideal for exploiting. The matter will be settled soon in a joint committee involving the Industry, Agriculture, and Housing Ministries. I could not say today what the outcome will be, but it will be a tough nut to crack."

# GOVERNMENT BILL WOULD LIMIT PESTICIDES IN FORESTRY

Stockholm SVENSKA DAGBLADET in Swedish 28 Oct 81 p 31

[Article: "Ban on Chemicals"]

[Text] The government is proposing a law that, in principle, would ban the use of pesticides to combat the spread of deciduous trees in coniferous forests. It is proposed that the law go into effect on 1 January 1982. It would replace the present, temporary ban.

The county government would be able to grant dispensations from the ban. However, dispensation could be granted only under certain clearly defined conditions.

The following conditions must be met before dispensation may be granted:

Pesticide use must be necessary for the regrowth of the forest and mechanical clearance not be feasible.

Furthermore, the forest area must be of little use for outdoor recreation, environmental conservation, and the enjoyment of the local populace.

What is reasonable from a forestry standpoint must be determined from various criteria. Biological, technical, and economic factors must be considered, such as geographic conditions, the type of forest land, the species of trees, and the terrain.

The availability of workers who could clear the forest by mechanical methods must also be considered.

## Municipal Influence

The Forestry Board and the municipality must also have a say at dispensation hearings. It is recommended that the municipality have a strong influence and that much consideration be given to the attitude of the municipality concerning the significance of the forest land for outdoor recreation, etc.

As at present, a fundamental condition for spraying would be that the Product Control Board had approved the pesticide.

The municipality would be able to appeal the decision of the county government.

"The argument in favor of a restrictive policy on the use of chemicals to control deciduous trees is strong," Agriculture Minister Anders Dahlgren (Center Party) said in a statement.

"Clearer Instructions"

"The forestry industry will now receive clearer information and I am convinced that methods will be developed for the rejuvenation of forests without the use of chemicals," Dahlgren said.

"The forestry industry will gain nothing from another decade of conflicts such as those during the 1970's. We all agree on the great significance of forests and the forestry industry for Sweden. According to the parliamentary resolution of 1979, forests should be managed well and, at the same time, the use of chemical pesticides to combat deciduous trees should be limited as much as possible."

"We are now going a step further. I believe that the forestry industry will support wholeheartedly the effort to maintain well managed forests. The requirements of the forestry law remain unchanged. If the problem cannot be solved in a reasonable manner in any other way, dispensation will be granted under the conditions indicated," Dahlgren said.

"Must Adjust"

"It is clear that the forestry program, in the near and distant future, must adjust to new conditions for combatting deciduous growth. In many cases, for example, preventive measures should be taken to limit the competition between coniferous and deciduous trees. A certain amount of deciduous growth can also have positive effects."

"The need for manpower will also increase. To meet this requirement more readily, full-time employment may often be required. It is advisable for the forestry industry to plan its activities with these considerations in mind," Anders Dahlgren said.

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